

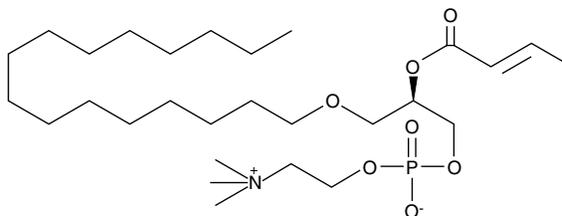
Product Information



Butenoyl PAF

Item No. 60929

CAS Registry No.: 474944-25-7
Formal Name: 1-O-hexadecyl-2-O-(2E-butenoyl)-*sn*-glyceryl-3-phosphocholine
MF: C₂₈H₅₆NO₇P
FW: 549.7
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that butenoyl PAF be stored as supplied at -20°C. It should be stable for at least one year.

Butenoyl PAF is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of butenoyl PAF in these solvents is approximately 0.5 and 10 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of butenoyl PAF is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of butenoyl PAF in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Butenoyl and butanoyl PAF are both products of the oxidative decomposition of 2-arachidonoyl phospholipids.¹ Oxygenation of C-5 of the 5,6 double bond followed by cleavage of the hydroperoxide results in a PAF-like compound with a 4-carbon residue esterified in the *sn*-2 position; similar oxidized lipid products also act as ligands for oxidized lipid receptors and peroxisome proliferator-activated receptor.² Although butenoyl PAF is 10-fold less potent than PAF as a PAF receptor agonist, it is present in an amount 100-fold greater than enzymatically generated PAF. Therefore, oxidation of LDL Phospholipids generates physiologically relevant bioactive PAF-like molecules.

References

1. Marathe, G.K., Davies, S.S., Harrison, K.A., *et al.* Inflammatory platelet-activating factor-like phospholipids in oxidized low density lipoproteins are fragmented alkyl phosphatidylcholines. *J. Biol. Chem.* **274**, 28395-28404 (1999).
2. Davies, S.S., Pontsler, A.V., Marathe, G.K., *et al.* Oxidized alkyl phospholipids are specific, high affinity peroxisome proliferator-activated receptor γ ligands and agonists. *J. Biol. Chem.* **276**, 16015-16023 (2001).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/60929

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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